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MEMORY WORK IN THE GRADES

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A. THE PROBLEM

In studying the memory work which several hundred college students had done while they were in the grades and high school, I found that the amount memorized varied from almost nothing to a vast quantity of selections. In some cases it was a purely disciplinary process, learning a piece by the cram method to be spouted forth on a Friday afternoon, and then tossed into the mental wastebasket to be remembered no more. In the better schools a carefully selected series of things of most worth in their literature lessons was memorized; but so disconnected and unrelated were the selections, and so frequently were they left unused, that few permanent ties of associations were developed; and hence by the time of their college days, most of these selections were past recall, and few, indeed, could repeat a whole selection of any length.

In the days of our fathers, copy-book mottoes and memory gems in spellers and readers were memorized because they seemed valuable to the compiler of the text, and not because the child understood them or appreciated their worth. Later educational opinion asserted that this memoriter process was wrong, and that nothing should be memorized that was not thoroughly understood. At any rate, rational processes superseded the old memoriter practice, now fallen into disrepute, and relatively little memory work has been done in the grades. Present-day opinion is painfully conscious that an irreparable loss has resulted from the failure to store the mind with carefully selected memory materials as a standard of reference for thought and expression of thought. Nearly two decades ago, James called attention to this matter:

The excesses of old-fashioned verbal memorizing and the immense advantages of object-teaching in the earlier stages of culture have perhaps led those who philosophize about teaching to an unduly strong reaction; and learning

things by heart is now probably somewhat too much despised. For when all is said and done, the fact remains that verbal material is on the whole the handiest and most useful material in which thinking can be carried on. Abstract conceptions are far and away the most economical instruments of thought, and abstract conceptions are fixed and incarnated for us in words. Statistical inquiry would seem to show that as men advance in life they tend to make less and less use of images, and more and more use of words. . . . I should say, therefore, that constant exercise in verbal memorizing must still be an indispensable feature in all sound education (1, p. 131).¹

In a recent volume Judd has emphasized this same thought:

We have of late come to regard memory work in the schools as something unworthy of a place of recognition in comparison with reasoning and the higher thought-processes. No one who gives the matter any thought can, however, fail to recognize the fact that the criticism of memory is not based on any real expectation on the part of teachers that students will be able to carry out the higher thought-processes without an appeal to memory. Criticisms of memory are directed, not against memory, but against bad forms of remembering. . . . If one wishes to have his students flexible and ready in ideas, he must give them that type of memory training which will make them both ready and flexible. The problem of modern teaching is not to discard memory, but rather to train the powers of retention and recall in a better way than formerly. To object to memory is very shortsighted; to improve memory is rational (2, pp. 70-72).

B. PRESENT TENDENCIES IN MEMORY WORK IN THE GRADES

The present trend in courses of study and educational literature places a renewed emphasis on memory work in the grades. In the Grand Rapids course of study in English the following instructions are given concerning the memory work: "Encourage the children to learn the poems they like; there is deep significance in the old-fashioned expression 'learning by heart.'" At the end of the first year "each child ought to know a dozen or more nursery rhymes and three or four other little poems." At the end of the second grade "each child ought to know by heart ten or twelve *Mother Goose* rhymes, two or three of Robert Louis Stevenson's poems, and one or two other favorites." At the end of the third grade "each child ought to know by heart two or three of Robert Louis Stevenson's poems, and one or two other favorites." At the end of the fourth grade "each child ought to know at least two or three short lyrics,

¹ Numbers refer to sources given in bibliography.

one or two ballads, entirely or in part, and many short passages which the pupils have found in their reading, and which have given pleasure either on account of a noble sentiment, a beautiful picture, or a musical combination of words." At the end of the fifth grade "each child ought to know at least two or three short lyrics and one or two ballads, entirely or in part." At the end of the sixth grade "each pupil ought to have added to his poems learned by heart one or two lyrics and two or three ballads, entirely or in part." At the end of the seventh grade "each pupil ought to know by heart several short passages which the pupils have found in their reading, and which have given pleasure, either on account of a noble sentiment, or a musical combination of words." At the end of the eighth grade "each pupil ought to know by heart one or two of the selections from Shakespeare, beautiful passages from *Snow-Bound* and the *Vision of Sir Launfal*, as well as a few of the lyrics and ballads which are practically memorized in the intensive class-study. The boys, especially, will find pleasure in reciting orations such as 'Spartacus,' 'King Philip,' or the 'Speech of Patrick Henry'" (3).

In the Ethical Culture School course of study in English the following excerpts may be noted. After describing the literary works to be covered in the sixth grade, the bulletin states that "there is a good deal of memorizing from all these sources—for memorizing is another habit which must be especially cultivated at this time. And it may be tardily mentioned here that throughout the grades memorizing of a considerable body of songs for festivals, assemblies, and choruses is systematically undertaken, so that they accumulate and keep alive a large repertoire of patriotic, festal, and seasonal songs, not to mention classic settings of some of the greatest English lyrics" (4, p. 26). In the eighth grade "copious selections are also made from the prose as well as from the poetry studied, for memorizing. If this capacity is not kept alive at this time, it will be found to deteriorate rather rapidly in the grades ahead" (4, p. 34). In discussing the unfortunate influence of the College Entrance Board upon the English work in secondary schools, the bulletin states that books and script have been so urgently demanded as the important end that pupils have remained

barbarians in oral expression, in reading aloud, and in appreciation of vocal values in literature. . . . Memorizing (a highly important matter) has been neglected (4, p. 37).

The habit of isolated study, the failure to link the old with the new and to reconsider it in new ways with greater maturity of judgment accounts for not a little of the barrenness and scrapiness of literary studies. In pursuance of the same principle of avoiding waste, the importance is recognized of continually recalling and repeating poems and passages which have been memorized. It is to be clearly understood by pupils, as by teachers, that the purpose of memorizing is to make of the passages memorized a *permanent* possession; and that it is to be recalled for any of several purposes (in unexpected tests, for instance), bearing upon content or form. The "snap," that is the perfunctory and undigested memorizing, which is what a teacher commonly gets when it is a mere matter of reciting for the day's mark, is a lamentable and demoralizing squandering of time and energy (4, p. 50).

Although an immense volume of experimental work has been done on memory, very little has been related to the memory of children, and much less has been put into books of method or practice in the grades. Books on pedagogy abound in matters of drill and general method, but one can count on his fingers those texts which plainly state the educational function of memory work in the grades; and in most cases these books are of recent publication. Kendall and Mirick state that "the memorizing of good verse should begin in the first grade and continue through the course. The selections should be made, first, for their intrinsic worth, and secondly, for their beauty and appeal to the particular grade and the individual pupil" (5, p. 52). "It is of primary importance that a pupil understand the thought before beginning to commit a selection to memory. He may not appreciate fully the significance of the passage, but it should convey sense to his intelligence or he should not learn it" (5, p. 53). Chubb states:

The work in memorizing, and the declamation that goes with it, has much value also as a means of confirming the child in correct ways of speaking. But its greatest service is in storing the mind with the priceless treasure of the noblest thoughts and feelings that have been uttered by the race. Especially important is it to make the first impression and memories, which are to impart a tone to one's spiritual system for life, rich and pure enough to outstep all baser and cruder songs, and to set the pitch to character. . . . On this account we can perform no worthier office for the child than to set singing in its mind, in order to fashion the norm of his taste, poems and pieces selected

with a fine scrupulousness. . . . In making our selection for memorizing, we may conveniently observe a broad distinction, commonly drawn in German schools, between those first-rate pieces which have upon them the stamp of permanence, that classic quality which fits them to be the "core" of the work, and those less important, quite passable pieces which we touch on lightly and make use of to serve subsidiary ends. The pieces that form our "core" are those that are to be carried forward from grade to grade, to be recalled and reused in new connections, and for comparative purposes, time and time again. To endear by repetition, to accumulate a common stock of old familiar songs that graft themselves deep in the affections and reveal gradually as the child grows, their music and meaning—this is a desideratum of every English course (6, pp. 48–50).

In two recent books Klapper clearly and forcefully presents the vital function of memorization in school work:

A good means of reviewing and applying the masterpiece is to require the children to memorize vital and striking parts. The teacher knows that memorizing literary selections has its educational results: (1) it enriches the vocabulary; (2) it develops a storehouse of beautiful expression; (3) it gives the child a number of lofty sentiments artistically expressed; (4) it leaves the child a permanent store of literary gems which grow in beauty and richness as the mind gains insight and appreciation. . . . All memorization by pupils should be prompted by an urgent motive. Let the child decide what parts of the masterpiece it wants to memorize. The choice usually falls upon those selections which were studied intensively and appreciatively. The pupils must then be led to feel that effective dramatization of their favorite selections is impossible unless they memorize them (7, p. 199).

In a later volume these principles are more fully treated:

(1) Memorizing gems of literature is a means of enriching the child's limited expressional stock. New words, strong phrases, traditional allusions, and classical expressions are acquired through a content that helps to give them both richer meaning and greater retention. (2) The mere knowledge of literary gems that are memorized is an acquisition that is worth while for its own sake. We must acquaint the child in an informal way with his literary heritage. (3) Memorization of literary gems gives children a permanent possession of sentiments deep in ethical significance and rich in poetic charm, which grow in meaning and beauty with the ever-widening experience of life. (4) But aside from the content aspect of these literary possessions, the child is becoming familiar with language structure that serves as a model for his own modes of expression. The child may not consciously set himself to imitate the selections he memorizes, but they nevertheless have a deep and subtle influence on his linguistic development. (5) The recitation of memorized literary gems

affords the teacher an excellent means of training the pupil in correct enunciation, clear articulation, correct voice control and modulation. (6) Another important gain that follows in the wake of dramatized recitation of memorized selections is increased confidence and more graceful self-expression. These values give the memory gem lesson a definite and undisputed place in every curriculum of English (8, pp. 206 ff.).

C. THE BEARING OF PSYCHOLOGY ON MEMORY WORK

The two factors in the memory process most immediately connected with our problem are retention and learning. Retention is largely a physiological factor depending on the nature of the nervous system, and varies with health and age. About all we can do to improve retentivity is to keep the physical condition up to par. The ability to retain increases as the child matures, and it reaches its maximum between fourteen and twenty years of age. Improvement in memory after adolescence is usually limited to associational, conceptional, and habitual lines.

On the other hand, the possibilities of developing memorial efficiency through better methods of learning are well-nigh unlimited. "The art of remembering," says James, "is the art of *thinking* . . . when we wish to fix a new thing in either our own mind or a pupil's, our conscious effort should be not so much to *impress* and *retain* it as to *connect* it with something else already there. The connection *is* the thinking; and if we attend clearly to the connection, the connected thing will certainly be likely to remain within recall" (1, p. 143). Things not natively interesting become so when grafted onto things already interesting. Thus James directs teachers to follow this simple program in keeping the attention of the child:

Begin with the line of his native interests, and offer him objects that have some immediate connection with these. . . . Next, step by step, connect with these first objects and experiences the later objects and ideas which you wish to instil. Associate the new with the old in some natural and telling way, so that the interest, being shed along from point to point, finally suffuses the entire system of objects of thought (1, pp. 95-96).

The unstable attention of the child wanders at random, at the mercy of the strongest stimuli, because there is no dominant-goal idea to direct the series of shifts. The sustained attention of the

scholar shifts no less readily, but each shift is in a line straight for the goal. There may be tangential movements as association may link up more or less parallel groups, but attention always comes back to the main line of thought, because meaning is found in unfoldment of the problem at hand. Through the use of things or through an active response to situations meaning becomes distinct and coherent.

In the memory process of the child, the capacity to retain and the capacity to learn are likewise the important factors:

The child's capacity to learn is inferior to that of the adult; but what has once been learned is retained better by children (9, p. 245).

In the interval immediately following memorizing (in the first twenty minutes) children forget more than adults in the same time; then the superiority of the children in native retentiveness appears; and they retain better what outlasts this period. Thus we may state that children receive all impressions and all educational influences with more difficulty than adults. They allow more to escape them in the immediately succeeding period, but retain with greater fidelity all that outlasts the first period of obliviscence (10, p. 91).

The child thinks chiefly in concrete individual imagery, though he can use verbal imagery just as the adult does. The child thinks more slowly and discriminates fewer sense qualities, because his limited experiences have not developed his power to analyze and combine them into a well-organized whole. The adult thinks in terms of verbal images, because he has developed the ability to use class terms instead of particular terms. The percept deals with particular, present things, whereas the concept deals with the understanding of the underlying principle connecting a series of particular things. Because concepts are not localized in particulars, verbal signs are used to give meaning to this class idea or principle. "Since meanings are not themselves tangible things, they must be anchored by attachment to some physical existence. Existences that are especially set aside to fixate and convey meanings are signs and symbols" (11, p. 171). These verbal signs localize a meaning in what would otherwise be a confused blur, and retain this meaning for further use in the comprehension of things. While we must not make language and thought synonymous, we must recognize that language is a necessary instrument in thinking as well as in the expression of thought. The chief functions which education must

render the child are: the enlargement of his vocabulary, greater precision in the use of words, and fluent use of the vernacular in consecutive discourse.

The best means of enlarging the vocabulary is through the development of a larger fund of concepts, which are the results of sensory experiences with concrete objects. Presentation of a rich sensory experience as a basis for imagination and understanding is most urgently needed, for frequently children find it easier to call a word than to form the appropriate concept represented by the word. Thus verbal memory often results in a weakened foundation for knowledge, for it is not verbal mastery that is lacking, but the ability to form readily images and concepts. While the child is in the naming stage, that is, when he simply names objects seen, it is of prime importance to introduce him to the big, live world of objects about him, and to his rich social heritage—the experiences of men of all ages—especially through stories and games. In later childhood, when the child defines in terms of use or action, plenty of motor materials should be presented, such as the dramatization of stories and the constructive play activities, in order to enable him to work out in concrete form the imagery which he has developed of his problem. The child's ability to observe, discriminate, and reason increases more rapidly with age than the ability to hold disconnected things in mind, partly because of the increasing ability to analyze and group materials and experiences. "Looseness of thinking accompanies a limited vocabulary," because meanings have not been made clear and distinct. "Command of language involves a command of things," because things are definitely located when their class-names are used. The development of a fluent use of the vernacular in consecutive discourse is facilitated by the mastery of a rich experience, and by the imitation of modes of expression of the great masters of literary expression.

D. METHODS IN MEMORY WORK

Since retentivity increases but slightly after early adolescence, it behooves the educative agencies to make full use of this factor in childhood. Sandiford holds that we greatly underestimate the memorial capacity of children; that 3,000 or more lines of prose

or poetry can be learned annually without strain; and that a fourth of this material will be permanently retained. However, as noted above, the child's learning capacity is limited, because he has not learned how to analyze and organize his particular experiences into a well-organized whole. The problem of memory work in the grades is, therefore, the problem of developing the most economical modes of study and learning.

The able teacher, who recognizes the problem, does not select memory materials to be forced upon children, but rather develops the meaning of the selection until she has created a real desire on the part of the children to make it a permanent mental possession without the deadening effect of the rote process. The selection is told, or read, explained, repeated, and dramatized until it is so firmly associated with a hundred factors already assimilated in the child's experience that, ere he is aware, the selection has been mastered. Since the child chooses the masterpieces best understood and most appreciated, Klapper asserts:

The problem of motivation may be solved by using the selection as the text for an intensive, appreciative reading lesson. Through the entire period the teacher must aim to bring within the children's sphere of appreciation all the elements that make the literary gem beautiful and rich in poetic imagery. . . . If they catch the message and feel its spirit, the memorization can be based on a real motive; if, for some reason, the selection prove uninspiring, it should not be forced upon them (8, p. 209).

In learning a selection the various parts must be properly related and the connecting words follow in their natural order. The last word of a line should be properly connected with the first word of the next line succeeding, and the one stanza with the stanza next succeeding. The process of learning precept upon precept and line upon line, independently, and then joining them to the remainder, links up words never found in conjunction when the whole poem is repeated. When a poem is read over until the sequence of ideas become memorized the words glide naturally into their proper setting. James says:

In learning "by heart" there are, however, efficient and inefficient methods; and by making the pupil skilful in the best method the teacher can both interest him and abridge the task. The best method is of course not to "hammer in" the sentences by mere reiteration, but to analyze them and think. For

example, if the pupil should have to learn this last sentence, let him first strip out its grammatical core, and learn, "The best method is not to hammer in, but to analyze," and then add the amplificative and restrictive clauses, bit by bit, thus: "The best method is of course not to hammer in the *sentences*, but to analyze *them and think*." Then finally insert the words "*by mere reiteration*," and the sentence is complete, and both better understood and quicker remembered than by a more purely mechanical method (1, p. 132).

Klapper summarizes the values of memorizing ideas in their logical sequences in this fashion:

First, it simplifies the memorization of the poet's words; each thought prompts its appropriate expression, and with little effort verbatim reproduction is achieved. Secondly, it tends to make recall rational rather than verbal. Study the strained face of the child who recites a memorized selection; the steady stare and the nervous anxiety give evidence of the fact that the child is focalizing all conscious effort on the next line or next word. The recitation is a verbal reproduction, not a reconstruction, thought by thought, of a real situation. When these children err they say what is absolutely devoid of meaning. But when the child learns first a series of thoughts he thinks constantly of the next idea, and when he errs he substitutes his own clumsy wording, with which he expresses the idea in mind in a less elegant form. A third value of such a procedure is that it trains children in systematic and sustained thinking (8, p. 209).

Those wishing clearly presented examples of this analytic work would do well to read Klapper, *Teaching of English*, chap. xii, and Haliburton and Smith, *Teaching Poetry in the Grades*.

Although the whole method of memorizing with its various modifications has proved the most economical method, neither education nor psychology has devised a systematic selection of separate pieces to fit into a well-organized whole. Too frequently each piece memorized is considered a whole in itself—for example, memorizing selections to be given once and remembered no more. In the above-mentioned citations from the Ethical Culture School course of study, directions are given for the proper relation of the new materials with the old for the purpose of making "the passages memorized a *permanent* possession." Chubb advocates the selection of pieces good enough in themselves, but which are to be used temporarily, and of pieces which have "the stamp of permanence, that classic quality which fits them to be the 'core' of the work." These "are to be carried forward from grade to grade, to be recalled

and reused in new connections, and for comparative purposes, time and time again." The lamentable weakness of our educational system is that there is no adequate connection or correlation of part with part. There is little organized effort to make the work done in the fourth grade function in the fifth grade, or in the fifth grade to recall and revive what has been done in the fourth grade. The following illustration shows that it has been done in isolated cases: The topic for discussion in the grammar lesson was "The Adjective." The evening before there had occurred a heavy thunder storm, followed by a brilliant rainbow spanning the entire eastern sky. The teacher asked how many had seen the rainbow. Nearly the entire class had seen it. Then she asked them to give words which described it. One after another gave descriptive words until nearly fifty were written on the board. Then this group of words was analyzed in terms of last night's rainbow, and, finally, about a dozen words were selected which described what the pupils had seen. With this as an introduction, the recitation led up to the explanation of the meaning of adjectives. Following this explanation, the teacher asked if they remembered any selections from their literature lessons in earlier grades which referred to rainbows and springtime. Bit by bit, the pupils pieced together several poems learned in preceding years, and these were recited and given a larger interpretation. The discovery that time is needed to make impressions permanent is just as true for the entire school period or life as for one task or lesson. There is therefore no more urgently needed injunction in education than the biblical statement: "Gather up the fragments that nothing be lost."

The materials memorized should not only be correlated, day by day and grade by grade, but also so thoroughly mastered that they will motivate behavior. The illustrations from the several authors quoted above show that the memory work should enlarge the expressional stock and should give a good mastery of the literary heritage. The growing familiarity with language structure molds the child's own language usage, though he may not consciously set himself to imitate his models. Thus the best that has been thought and said should be made more natural through thorough habituation than the rude colloquialisms of his native heath. However,

the greatest service is in storing the mind with the noblest thoughts and feelings uttered by the race, which will function in conduct and the making of character. "Especially important is it to make the first impressions and memories, which are to impart a tone to one's spiritual system for life, rich and pure enough to out-sing all baser and cruder songs, and to set the pitch to character." "To endear by repetition; to accumulate a common stock of old, familiar songs that graft themselves deep in the affections and reveal gradually their music and meaning" (6, p. 50)—this is the desideratum of memory work in the grades.

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